

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1-5, 8-12, 14, 16-19, 21, 23 and 24, CANCEL claims 6, 7 and 25, and ADD new claims 26-28 in accordance with the following:

1. (CURRENTLY AMENDED) A computer system connected to a data communications network, said system comprising:

a first computer;

a ~~second~~, redundant second computer that is independent of the first computer;

a computer-to-computer connection between the first computer and the redundant second computer enabling the first computer to match with the redundant second computer by comparing a first work result of the first computer with a second work result of the redundant second computer; and

at least one computer-to-network connection to connect both the first and second computers to the data communications network independent from the computer-to-computer connection so that receipt of any data from the data communications network is limited to the first computer and transmission of any data to the data communications network is limited to the redundant second computer; wherein at least an initial processing of the data received from the data communications network is limited to the first computer,

wherein the first computer is configured to convert, transmit and to store in the redundant second computer non-verified or non-verifiable data received by the first computer only in non-processable form, and a virus is detected on the first computer by a comparison of the first and second work results, where the first computer is restored to a virus-free state by copying a state of the redundant second computer onto the first computer.

2. (CURRENTLY AMENDED) The computer system as claimed in claim 1, wherein the first computer is configured to verify the received data in the first computer, and wherein the first computer is configured to supply only verified data to the redundant second computer in processable form.

3. (CURRENTLY AMENDED) The computer system as claimed in claim 1, wherein the first computer and the redundant second computer are configured to independently verify the received data, and wherein only matching verified data are stored in the redundant second computer in processable form.

4. (CURRENTLY AMENDED) The computer system as claimed in claim 1, further comprising: a central data memory,
wherein direct access to internal data of the computer system contained in a central data memory is limited to the redundant second computer; and
wherein the first computer is configured to receive the internal data only upon request via the redundant second computer.

5. (CURRENTLY AMENDED) The computer system as claimed in claim 1, further comprising: an independent, redundant third computer; and
wherein the redundant second computer is configured to match with the redundant third computer by comparing the second work result of the redundant second computer with a third work result of the redundant third computer.

Claims 6 and 7 (CANCELLED)

8. (CURRENTLY AMENDED) The method of claim 26, wherein only the redundant second computer directly accesses internal data contained in a central data memory, and wherein the first computer indirectly accesses the internal data only upon request via the redundant second computer.

9. (CURRENTLY AMENDED) The method of claim 26, further comprising matching the second work result of the redundant second computer with a third work result of a third computer.

10. (CURRENTLY AMENDED) The computer system as claimed in claim 1, wherein connection between the first computer and the redundant second computer forms an internal network of the computer system and wherein the data communications network is an external network with respect to the computer system.

11. (CURRENTLY AMENDED) The computer system as claimed in claim 1, wherein the first computer independently verifies the received data producing the first work result and wherein the redundant second computer independently verifies the received data producing the second work result.

12. (CURRENTLY AMENDED) The computer system as claimed in claim 1, wherein data processed by the first computer produces the first work result and wherein data processed by the redundant second computer produces the second work result.

13. (PREVIOUSLY PRESENTED) The computer system as claimed in claim 12, wherein the first and second work results are produced by executing at least one of horizontal parity checks and parallel balancing.

14. (CURRENTLY AMENDED) The computer system as claimed in claim 1, wherein said matching by the first computer with the redundant second computer is performed at an end of a program or when memory is being accessed.

15. (PREVIOUSLY PRESENTED) The computer system as claimed in claim 1, wherein all of the initial processing is performed by the first computer.

16. (CURRENTLY AMENDED) The method as claimed in claim 26, wherein connection between the first computer and the redundant second computer forms an internal network of a[[the]] computer system and wherein the data communications network is an external network with respect to the computer system.

17. (CURRENTLY AMENDED) The method as claimed in claim 26, wherein the first computer independently verifies [[the]] received data producing the first work result and wherein the redundant second computer independently verifies the received data producing the second work result.

18. (CURRENTLY AMENDED) The method as claimed in claim 26, wherein data processed by the first computer produces the first work result and wherein data processed by the redundant second computer produces the second work result.

19. (CURRENTLY AMENDED) The method as claimed in claim 26, wherein a match ~~said matching~~ by the first computer with the redundant second computer is performed at an end of a program or when memory is being accessed.

20. (PREVIOUSLY PRESENTED) The method as claimed in claim 26, wherein all of the initial processing is performed by the first computer.

21. (CURRENTLY AMENDED) The method as claimed in claim 26, further comprising matching the redundant second computer ~~matching with [[a]]an independent,~~ redundant, independent third computer by comparing the second work result of the redundant second computer with a third work result of the redundant third computer.

22. (PREVIOUSLY PRESENTED) The method as claimed in claim 21, wherein only the second and third computers have access to internal data of the computer system and wherein the redundant third computer is configured to implement operation and monitoring of an automation system.

23. (CURRENTLY AMENDED) The computer system as claimed in claim 5, wherein user inputs are supplied via a keyboard or a mouse in parallel to the first computer, the second redundant computer and the redundant third computer.

24. (CURRENTLY AMENDED) The method as claimed in claim 21, wherein user inputs are supplied via a keyboard or a mouse in parallel to the first computer, the redundant second computer and the redundant third computer.

25. (CANCELLED)

26. (NEW) A method, comprising:
establishing a computer-to-computer connection between a first computer and a redundant second computer;
comparing a first work result of the first computer with a second work result of the redundant second computer;
establishing at least one computer-to-network connection between a data communications network and both of the first computer and the redundant second computer,

independent from the computer-to-computer connection, so that receipt of any data from the data communications network is limited to the first computer, and transmission of any data to the data communications network is limited to the redundant second computer;

limiting at least an initial processing of data received from the data communications network to the first computer; and

transmitting from the first computer to the redundant second computer any non-verified data and non-verifiable data received by the first computer only in non-processable form.

27. (NEW) A method, comprising:

establishing a computer-to-computer connection between a first computer and a redundant second computer;

comparing a first work result of the first computer with a second work result of the redundant second computer;

establishing at least one computer-to-network connection between a data communications network and both of the first computer and the redundant second computer, independent from the computer-to-computer connection, so that receipt of any data from the data communications network is limited to the first computer, and transmission of any data to the data communications network is limited to the redundant second computer;

transmitting from the first computer to the redundant second computer any non-verified data and non-verifiable data received by the first computer only in non-processable form;

detecting a virus on the first computer based on a comparison result of said comparing of the first and second work results; and

restoring the first computer to a virus-free state, if a virus is detected, by copying a state of the redundant second computer onto the first computer.

28. (NEW) The method of claim 27, further comprising limiting at least an initial processing of data received from the data communications network to the first computer.